NRL BAA Announcement
#55-11-05

ADVERSARIAL BEHAVIOR MODELING AND DECISION SUPPORT

The Adversarial Modeling and Exploitation (AMX) Office of the Naval Research Laboratory (NRL) seeks proposals for innovative research and development in information technology. The AMX Office conducts a broad spectrum of research in the development of techniques, technologies, and tools to support our understanding and modeling of adversarial behavior. Research in the Office is inherently multi-disciplinary because real-world military problems are rarely solved within a single research discipline. Current and anticipated areas of research focus include:

1) **Behavioral Characterization of Adversaries.** NRL is interested in innovative S&T for understanding the behavior of individuals, groups, societies, and cultures. Characterizing these behaviors will inform models or lead to the development of models that inform decision makers to understand and shape non-conventional operations, such as counter-insurgency, stabilization/security/transition and reconstruction, humanitarian assistance, law enforcement. Current in-house research attempts to characterize the observable behaviors of individuals and teams with hostile intentions. NRL is particularly interested in research concepts that are amenable to web-based applications to support military/joint/coalition/interagency operations, model building, training regimens, and other capabilities to improve understanding, prediction, and methods of shaping human behavior across different cultures. NRL is also interested in leveraging sensor and data processing technologies to enable behavior identification and tracking. Specifically, NRL is interested in solutions that include the empirical derivation and validation of observable adversarial behaviors or behavior patterns that can be automatically identified through stand-off sensor technologies such as video or IR. Given the surge in surveillance capabilities in recent years, approaches that leverage existing techniques and integrate ongoing video surveillance and processing research are particularly of interest.

2) **Enhancing Decision Support/Analysis Capabilities with Behaviors.** NRL is interested in innovative S&T research in decision/analysis support to military/joint/coalition/interagency operations. Current in-house research attempts to characterize adversarial risk based on integrating geospatial and social data. S&T for this focus area could include data fusion tools, data visualization and display applications, information extraction and knowledge discovery, forecasting and risk assessment, and new approaches for managing very large data sets. NRL is particularly interested in new methods and techniques for integrating spatial data with non-spatial data derived from all

source intelligence feeds/open source databases; for analyzing with spatial statistics; and for assessing and understanding the impact that uncertainty, error, and confidence in measurements have on projections and forecasts.

Address White Papers (WP) to nrlproposals. Allow one month before requesting confirmation of receipt of WP, if confirmation is desired. Substantive contact should not take place prior to evaluation of a WP by NRL. If necessary, NRL will initiate substantive contact.